

Remarks/Arguments

Claims 9 - 16 are pending. Claims 9 and 16 have been amended without prejudice herein.

Claims 9 – 16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Friedman (United States Patent No. 5,499,294) in view of Vu (United States Patent No. 6,557,104). Independent Claim 9 has been amended to clearly recite a “device for authenticating a user who takes pictures made up of digital data comprising a picture taking apparatus associated with detachable security elements, each detachable security element being specific to a user”. Independent Claim 16 has been similarly amended. Claims 9 and 16 being amended, this rejection is respectfully traversed, as the prior art fails to teach or suggest each of the limitations recited in the present claims. Further, Applicant submits that no basis exists for combining or modifying the references as suggested by the Examiner, absent Examiner’s impermissible use of hindsight.

To establish a prima facie case of obviousness, all of the recited claim limitations must be taught or suggested in the prior art. See, MPEP 2143.03; see also, *In re. Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Further, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine reference teachings. See, M.P.E.P. 706.02(j).

Still further, M.P.E.P. 2143.01 provides:

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also

suggests the desirability of the combination. *In re Mills*, 916 F. 2d 680, 16 USPQ 2d 1430.

In the present case, the primary reference Friedman fails to even contemplate the problem addressed by the present invention, namely, that of authenticating a user who takes pictures, and instead teaches a solution to a different problem. The Friedman reference is directed to authenticating the digital image taken from the picture taking device itself (or camera), and not a user of the device. *See, e.g., Specification, page 1, lines 14 – 28.* More particularly, Friedman teaches, “a public key unique to the digital camera system” (rather than a user) in order to authenticate the digital image. *See, U.S. Pat. 5,499,294, col. 4, lines 30 – 46.* As described in column 5, line 49 of Friedman, the image file emerging in digital form from a digital camera is signed, but the camera may be used by several journalists or other non-authorized journalists or individuals. Accordingly, Friedman merely teaches authenticating a camera, which authentication does not provide the security recited in the present invention of authenticating the user through a detachable security element.

In contradistinction, Claim 9 recites, in part:

A device for authenticating a user who takes pictures made up of digital data comprising a picture taking apparatus associated with detachable security elements, each detachable security element being specific to a user...(emphasis added).

Thus, Friedman clearly fails to contemplate the problem to which the claimed invention is directed, namely “a device for authenticating a user”, and also fails to disclose or suggest the structural features and limitations for accomplishing this user authentication, which include “a picture taking apparatus associated with detachable

security elements, each detachable security element being specific to a user" and wherein the detachable security element comprises "a circuit associated with a secret key K1 specific to that security element and carrying out the signing of at least part of the digital data to give an encrypted output digital data, the security element being connected to the picture taking apparatus through an interface allowing a bi-directional transfer of data."

The Examiner attempts to remedy the shortcomings of Friedman by asserting the Vu reference. On page 3 of the present Office action, the Examiner states that

Vu explains that "any application which requires some secret information in order to process data can be adapted to take advantage of a smart card's secure processing environment" (col. 2, lines 19-22), it would have been obvious to modify the picture taking apparatus of Friedman to include the smart card interface. The suggestion/motivation for doing so would have been to take advantage of the secure processing environment provided by Vu's smart card.

In response, Applicant submits no motivation whatsoever exists for combining the Friedman and Vu references as suggested by the Examiner, absent impermissible hindsight gleaned from Applicant's own disclosure in an attempt to arrive at the claimed invention. First, as mentioned above, Friedman teaches away from using a detachable security element specific to a user – in at least that Friedman explicitly teaches a public key unique to the digital camera (and not a user of the camera) for authenticating the pictures associated with the digital camera. Second, the Vu reference relates to a method for secure processing of cryptographic keys. While Vu mentions authentication using a smart card scheme in its background, Vu goes on to further state that

[t]he physical smart card scheme, however, is expensive and cumbersome because each user must have a physical smart card and a smart card reader in order to gain system access. ... Installing physical smart card readers in each computer could represent a significant expense for even a small implementation. *U.S. Pat. 6,557,104, col. 2, lines 22 – 29.*

Still further, the Vu reference recites:

[i]t would therefore be desirable to have a computer security system in which cryptographic keys, algorithms, and associated programs are stored and processed in a secure processing environment, which cannot be accessed by other system processes or observed by the user. It would also be desirable for the security system to use existing hardware, without requiring any additional peripheral devices. *U.S. Pat. 6,557,104, col. 2, lines 44 – 50.*

Thus, Vu also teaches against the claimed combination, i.e., against using a detachable security element to authenticate a user, where each detachable security element is specific to a user. In fact, the Vu reference itself admits the teaching of “[a] method and apparatus [that] provides secure cryptographic key processing without the need for expensive smart card hardware.” U.S. Pat. 6,557,104, col. 4, lines 7 – 10. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. See, e.g., *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

Hence, one of ordinary skill in the art, upon reading the Vu reference, would not be motivated to modify Friedman’s teaching of authenticating the picture from a digital camera to redirect it to authenticating a user, and to further modify Friedman’s digital signature processing by including therein a detachable smart card process that Vu itself

teaches is undesirable, absent impermissible hindsight gleaned from Applicant's own disclosure. The above notwithstanding, even assuming arguendo, that a reason exists for substituting Vu's smart card interface in place of Friedman's processing, such modification would merely yield a different mechanism for authenticating the digital camera, and not the user of the picture taking apparatus, as recited in present claim 1.

Accordingly, as Friedman fails to teach or suggest a detachable security element being specific to a user; and Vu expressly teaches against the use of smart cards specific to users, Applicant respectfully submits a proper motivation for combining the teachings of Friedman and Vu to reach a device for authenticating a user who takes pictures made up of digital data comprising a picture taking apparatus associated with detachable security elements, each detachable security element being specific to a user, is clearly lacking.

Wherefore, Applicant respectfully requests reconsideration and removal of the rejection of Claim 9. Applicant also requests reconsideration and removal of the rejections of Claims 10 – 15, at least by virtue of these claims' ultimate dependency upon a patentably distinct base Claim 9.

In analogous fashion to that described above in regard to Claim 9, independent Claim 16 as amended recites, in part,

A system comprising a device for authenticating a user who takes pictures made up of digital data comprising a picture taking apparatus and a security element carrying out the signing of at least part of the digital data, the security element being a detachable element comprising a circuit associated with secret key K1, the detachable element and the associated secret key K1 being specific to a user.

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For the reasons discussed above with regard to Claim 9, Applicant respectfully requests reconsideration and removal of the rejection of Claim 16.

CONCLUSION

Having fully addressed the Examiner's rejections, Applicants submit that the present application is in condition for allowance and respectfully request such action. No fee is believed due in regard to the present amendment. However, if a fee is due, please charge the fee to Deposit Account 07-0832. Should any questions arise regarding any of the above, the Examiner is requested to contact the undersigned at 609-734-6815.

Respectfully submitted,



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CERTIFICATE OF MAILING

I hereby certify that this amendment is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to [Mail Stop Amendment], Commissioner for Patents, Alexandria, Virginia 22313-1450 on:

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Linda Tindall